

REMARKS

Claims 1-19 are pending in the application; the status of the claims is as follows:

Claim 1, 2, 4, 5, 10, 11, 13-16, 18, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,602,791 B2 to Ouellet et al. ("Ouellet") in view of U.S. Patent No. 5,846,396 to Zanzucchi et al. ("Zanzucchi") and U.S. Application Publication No. US 2002/0124896 A1 to O'Connor et al. ("O'Connor").

Claims 3, 12, and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi and O'Connor as applied to claims 1, 2, 4, 5, 10, 11, 13-16, 18, and 19, and further evidenced by Wikipedia.

Claims 6, 7, and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi as evidence by Wikipedia.

Claim Amendments

Claims 1, 6, 10 and 15 have been amended to more particularly point out and distinctly claim the invention. These changes do not introduce any new matter.

35 U.S.C. § 103(a) Rejections

The rejection of claims 1, 2, 5, 10, 11, 14-16, and 19 under 35 U.S.C. § 103(a), as being unpatentable over Ouellet in view of Zanzucchi and O'Connor, is respectfully traversed based on the following.

Ouellet shows a method for forming micro-channels in a substrate including semiconductor devices (5:1-5). An opening 26 is formed in layers above a silicon dioxide

layer 18, that allows isotropic etching of an opening 34. Outlet also includes a description of a prior art device in Figure 1 (3:46-65). In this device, layers of polymer substrates with micro-channels formed therein are thermally bonded together (3:54-58).

Zanzucchi shows a liquid distribution system. The distribution system may include layers of plastic (19:19-44).

O'Connor shows a modular microfluidic system including microfluidic coupling devices 20 including an adhesive layer or coating to bond the microfluidic coupling device into its desired position ([0056]).

In contrast to the cited references, claim 1 includes:

a member for positioning the pump unit and the channel unit with respect to each other,

Support for this limitation is provided in Figures 14-18 and ¶¶ [0087] – [0096] of the specification. This member ensures positioning between the pump unit and the channel and leads to more stable operation of the microfluidic device (¶ [0091]). None of the cited references shows or suggests this limitation. Because there is no suggestion of this limitation, it would not have been obvious to one of skill in the art from the references.

"All words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP § 2143.03 (entitled "ALL CLAIM LIMITATIONS MUST BE CONSIDERED") *quoting In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The cited references do not show or suggest the above quoted limitation. Therefore, considering every limitation of claim 1, there is no reason why one skilled in the art would have considered the invention of claim 1 obvious and there is no factual basis to support a *prima facie* case for obviousness of claim 1. "The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." MPEP § 2143.03. Therefore, claim 1 would not have been obvious over the

cited references to one skilled in the art at the time of the invention. Claims 2 and 5 are dependent upon claim 1, and thus include every limitation of claim 1. Therefore, claims 2 and 5 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claims 1, 2, and 5 comply with 35 U.S.C. § 103.

Also in contrast to the cited reference, claim 10 includes:

a member for positioning the pump unit and the channel unit with respect to each other,

As noted above with regard to claim 1, none of the cited references shows or suggests this limitation. Because there is no suggestion of this limitation, it would not have been obvious to one of skill in the art from the references. Therefore, considering every limitation of claim 10, there is no reason why one skilled in the art would have considered the invention of claim 10 obvious and there is no factual basis to support a *prima facie* case for obviousness of claim 10. Claims 11 and 14 are dependent upon claim 10, and thus include every limitation of claim 10. Therefore, claims 11 and 14 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claims 10, 11, and 14 comply with 35 U.S.C. § 103.

Also in contrast to the cited references, claim 15 includes:

a member for positioning the pump unit and the channel unit with respect to each other,

As noted above with regard to claim 1, none of the cited references shows or suggests this limitation. Because there is no suggestion of this limitation, it would not have been obvious to one of skill in the art from the references. Therefore, considering every limitation of claim 15, there is no reason why one skilled in the art would have considered the invention of claim 15 obvious and there is no factual basis to support a *prima facie* case for obviousness of claim 15. Claims 16 and 19 are dependent upon claim 10, and thus include every limitation of claim 15. Therefore, claims 16 and 19 also would not have been obvious

over the cited references to one skilled in the art at the time of the invention. Thus, claims 10, 11, and 14 comply with 35 U.S.C. § 103.

Accordingly, it is respectfully requested that the rejection of claims 1, 2, 5, 10, 11, 14-16, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi and O'Connor, be reconsidered and withdrawn.

The rejection of claims 3, 12, and 17 under 35 U.S.C. § 103(a), as being unpatentable over Ouellet in view of Zanzucchi and O'Connor as applied to claims 1, 2, 4, 5, 10, 11, 13-16, 18 and 19, and further evidenced by Wikipedia, is respectfully traversed based on the following.

As noted above Oullet, Zanzucchi and O'Connor do not show or suggest a "a member for positioning the pump unit and the channel unit with respect to each other" as provided in claim 1. Wikipedia also does not show or suggest this limitation. Thus, there is no reason why one skilled in the art would have considered the invention of claim 1 obvious over the cited references and there is no factual basis to support a *prima facie* case for obviousness of claim 1. Claim 3 is dependent upon claim 1, and thus includes every limitation of claim 1. Therefore, claim 3 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claim 3 complies with 35 U.S.C. § 103.

As noted above Oullet, Zanzucchi and O'Connor do not show or suggest a "a member for positioning the pump unit and the channel unit with respect to each other" as provided in claim 10. Wikipedia also does not show or suggest this limitation. Thus, there is no reason why one skilled in the art would have considered the invention of claim 10 obvious over the cited references and there is no factual basis to support a *prima facie* case for obviousness of claim 10. Claim 12 is dependent upon claim 10, and thus includes every limitation of claim 10. Therefore, claim 12 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claim 12 complies with 35 U.S.C. § 103.

As noted above Oullet, Zanzucchi and O'Connor do not show or suggest a "a member for positioning the pump unit and the channel unit with respect to each other" as provided in claim 15. Wikipedia also does not show or suggest this limitation. Thus, there is no reason why one skilled in the art would have considered the invention of claim 15 obvious over the cited references and there is no factual basis to support a *prima facie* case for obviousness of claim 15. Claim 17 is dependent upon claim 15, and thus includes every limitation of claim 15. Therefore, claim 17 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claim 17 complies with 35 U.S.C. § 103.

Accordingly, it is respectfully requested that the rejection of claims 3, 12, and 17 under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi and O'Connor as applied to claims 1, 2, 4, 5, 10, 11, 13-16, 18 and 19, and further evidenced by Wikipedia, be reconsidered and withdrawn.

The rejection of claims 6 and 7 under 35 U.S.C. § 103(a), as being unpatentable over Ouellet in view of Zanzucchi, is respectfully traversed based on the following.

Also in contrast to the cited reference, claim 6 includes:

a member for positioning the pump unit and the channel unit with respect to each other, ...

As noted above with regard to claim 1, none of the cited references shows or suggests this limitation. Because there is no suggestion of this limitation, they would not have been obvious to one of skill in the art from the references. Therefore, considering every limitation of claim 6, there is no reason why one skilled in the art would have considered the invention of claim 6 obvious and there is no factual basis to support a *prima facie* case for obviousness of claim 6. Claim 7 is dependent upon claim 7, and thus includes every limitation of claim 6. Therefore, claim 7 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claims 6 and 7 comply with 35 U.S.C. § 103.

Accordingly, it is respectfully requested that the rejection of claims 6 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi, be reconsidered and withdrawn.

The rejection of claim 8 under 35 U.S.C. § 103(a), as being unpatentable over Ouellet in view of Zanzucchi as evidenced by Wikipedia, is respectfully traversed based on the following.

As noted above, Oullet and Zanzucchi do not show or suggest a “a member for positioning the pump unit and the channel unit with respect to each other” as provided in claim 6. Wikipedia also does not show or suggest this limitation. Thus, there is no reason why one skilled in the art would have considered the invention of claim 6 obvious over the cited references and there is no factual basis to support a *prima facie* case for obviousness of claim 6. Claim 8 is dependent upon claim 6, and thus includes every limitation of claim 6. Therefore, claim 8 also would not have been obvious over the cited references to one skilled in the art at the time of the invention. Thus, claim 8 complies with 35 U.S.C. § 103.

Accordingly, it is respectfully requested that the rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Ouellet in view of Zanzucchi as evidenced by Wikipedia, be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims. Accordingly, no fee based on the number or type of claims is currently due. However, if a

Application No. 10/664,326
Amendment dated September 12, 2008
Reply to Office Action of March 14, 2008

fee, other than the issue fee, is due, please charge this fee to Sidley Austin LLP Deposit Account No. 18-1260.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin LLP Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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September 12, 2008